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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,258	12/21/2001	Jesse Ambrosina	56231-336 (MKS-94)	6526

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EXAMINER
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MILLER, TAKISHA S

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/032,258

Applicant(s)

AMBROSINA ET AL.

Examiner

Takisha Miller

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2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 07 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on January 17<sup>th</sup> 2003 have been approved by the examiner.
2. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

### ***Claim Rejections - 35 USC § 112***

3. The rejection on claims 1-21 under 35 U.S.C. 112 (2<sup>nd</sup>) has been withdrawn by the examiner because the applicant has amended the claims which are free of new matter in the January 7<sup>th</sup>, 2003 response.

### ***Response to Arguments***

4. Applicant's arguments filed January 7<sup>th</sup>, 2003 have been fully considered but they are not persuasive. Applicant argues that Vavra et al. does not disclose a thermal ground that substantially eliminates the conduction of a thermal gradient from a mass flow controller housing to a mass flow sensor. This argument is not persuasive because Vavra et al. clearly discloses a thermal ground/grounded leads (70,72,74) which provide a thermal ground to the sensor assembly (Col. 5, lines 37-38).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1- 6,9-17,20 are rejected under 35 U.S.C. 102(b) as being anticipated by Vavra et al. (5,279,154). Vavra et al. teaches a thermal mass flow controller (10) and housing comprising: a first chamber for enclosing a bypass tube (18), the first chamber/lower chamber including a wall (62)(Fig.2), a second chamber/upper chamber for enclosing a sensor tube (30), the second chamber which is substantially cylindrical (cl.20), includes a wall (64) for mounting to said wall (62) of the first chamber, both walls (62,64) including input (32) and output (38) apertures (Fig.3); a thermal ground/grounded leads (70,72,74) which provide a rectangular cross-section of conductive thermal contact (Fig.2) is located substantially midway between the input (32) and output (38) apertures (cls.2,4,5,11-15)(Col. 5, lines 37-38) and a conductive thermal element (250,254) which is substantially cylindrical (cl.20), composed of a high thermal conductivity material (Col. 6, lines 34-49) in conductive thermal contact with at least a portion of the second chamber (cls.1,3,6,9,17,19), a control valve assembly (14), and a sensor assembly (12,16)(cl.10).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vavra et al. (5,279,154). With respect to claims 7: the shapes of the thermal ground, i.e., rectangular or circular cross-section, absent any criticality, are only considered to be obvious modifications of the shape of thermal ground disclosed by Vavra et al., as the courts have held that a change in shape or configuration, without any criticality, is within the level of skill in the art as the particular shape claimed by Applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See *In re Dailey*, 149 USPQ 47 (CCPA 1976).

9. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vavra et al. (5,279,154) in view of Vu (5,803,507). Vavra et al. teach a thermal mass flow controller housing but does not teach an enclosure that substantially envelops the first and second chambers. Vu teaches an enclosure/cover (26) that substantially envelops a first and second chamber (Figs. 1,2) for the purpose of housing the apparatus.

Since Vavra et al. and Vu are both from the same field of endeavor, the purpose disclosed by Vu would have been recognized in the pertinent art of Vavra et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Vavra et al. to include an enclosure which substantially envelops a first and second chamber as taught by Vu to house the apparatus and protect it from atmospheric conditions.

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10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vavra et al. (5,279,154). Regarding claim 21: Vavra et al. disclose the claimed invention as stated above except for the thermally conductive element (250,252) and the exterior of the second chamber forming an integrally molded unitary member. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the thermally conductive element (250,252) and the exterior of the second chamber forming an integrally molded unitary member, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. Howard v. Detroit Stove Works, 150 U.S. 164 ( 1893 ).

#### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Takisha Miller whose telephone number is (703) 305-4969. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

TM  
March 18, 2003

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800